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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,288	08/27/2003	Larry L. Gillanders	PC-802	5483

23717 7590 02/23/2005

LAW OFFICES OF BRIAN S STEINBERGER
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EXAMINER

FLETCHER III, WILLIAM P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/649,288	GILLANDERS ET AL.	
	Examiner	Art Unit	
	William P. Fletcher III	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 25-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/27/03</u> . | 6) <input checked="" type="checkbox"/> Other: <u>definition of "riser"</u> . |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-24 in the reply filed on 11/23/2004 is acknowledged. The traversal is on the ground(s) that: the examiner has not stated that separate searches and separate examiners are necessary to examine the inventions; and separate examination of the inventions represents an undue time and financial burden on both applicant and the Office. This is not found persuasive.
2. For purposes of the initial requirement, a serious burden on the examiner may be *prima facie* shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search as defined in MPEP § 808.02. As set-forth in the prior Office action, process claims 1-24 require a search in class 427, including at least subclass 230, while apparatus claims 25-42 require a search in class 118, including at least subclass 317, where process is irrelevant. The burden on the examiner further extends to the patentability issues associated with, and evolving as a result of, searching additional inventions. Issues related to a process are frequently very different from those related to an apparatus. For example, the issues related to the structural requirements of an apparatus need not be familiar to an examiner of specific processes. Consequently, examination of process claims 1-24 and apparatus claims 25-42 present a serious burden on the examiner both because of (1) a divergent or non-overlapping search related to the separate classification of the inventions and (2) the evolution of patentability issues related to searching multiple and distinct inventions. As a final point, financial burden on applicant is not a "policy consideration" behind the Office's restriction practice.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

3. The IDS filed 8/27/2003 lists, as the first cited reference, US 4,324,427 A to Stoltz, having an issue date of 2/9/1982. It is believed that this is a typographical error as US 4,324,427 A was issued to Huang et al. on 4/13/1982 and concerns an automobile bumper. The examiner has located and considered US 4,314,427 A to Stoltz, issued 2/9/1982. The annotated, initialed, signed, and dated Form PTO-1449 is attached to this Office action.

Specification

4. The abstract of the disclosure is objected to because it is too long (greater than 150 words or 15 lines). Correction is required. See MPEP § 608.01(b).

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 8, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kruse (US 6,739,950 B1).

With respect to claim 1, this reference teaches a process for applying a barrier coating to pipes. The process may be used for renovating pipes of any size, length, or arrangement, in any type of pipe system, including water pipes in a building (3:12-17 and 6:top). The process serves to prolong the lifetime of the pipe system and reduce or avoid the expense of replacing all or part of the pipe system (3:15-17). The process includes the basic steps of drying the piping system, profiling (i.e., cleaning and removing encrustation from) the dried piping system, applying a barrier coating to the interior walls of the profiled piping system, and utilizing various means to evaluate the coated piping system (3:25-30; 6:6-11 and 25-58). Further, this reference indicates that the problem with the piping system to be solved is renovation/removal of the build-up of accretions or scale on the inner surfaces of the piping system (1:top). Identification of this problem must, necessarily, be part of the process as the reference discloses no other use therefor. Lastly, this reference indicates that the equipment/apparatus is set-up on-site (3:25-49). Use of labor must, necessarily, be part of the process as the reference does not disclose that the apparatus sets itself up or that the process runs/monitors itself.

With respect to claim 8, Kruse explicitly teaches pipe diameters within applicant's claimed range, including the endpoint of 6 inches (Tables 1 and 2).

With respect to claim 9, insofar as Kruse teaches that the piping system may include elbows, and insofar as the examiner understands elbows to be inclusive of 90° bends, Kruse anticipates this claim as well.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 2-7 and 10-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kruse (US 6,739,950 B1).**

With respect to claim 2, Kruse explicitly teaches evaluating the piping wall thickness and integrity with respect to leaks (5:45-53 and 6:35-52). Insofar as the condition/quality of the water running through the pipes is responsible for the encrustation/scale on the pipes — which is the reason for carrying-out the process — identifying the fact that such encrustation/scale is present inherently satisfies the limitations requiring ‘interviewing on-site to determine problems’ and ‘evaluating local and onsite water qualities to determine hardness and aggressive qualities.’ Lastly, it is the examiner’s position that developing a proposal or “plan-of-attack,” is part of the

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common and conventional business practices known to one of ordinary skill in the art and, therefore, obvious.

With respect to claim 3, as noted above, Kruse teaches on-site set-up of equipment. The equipment/apparatus is attached to the piping system through hosing (see Fig. 1). Kruse further teaches mechanically isolating the piping system (4:10-15). Lastly, it is the examiner's position that 'completing contract development for a proposal' and 'commencing project planning for the proposal' are part of the common and conventional business practices known to one of ordinary skill in the art and, therefore, obvious.

With respect to claim 4, because Kruse teaches attaching the equipment/apparatus to opposite ends of the piping system, the layout of the system must be known/mapped. Additionally, Kruse teaches attaching the equipment/apparatus and draining, flushing, and drying the water from the isolated piping system (4:10-29). Kruse does not explicitly teach that the part of the piping system treated is a riser. According to the common, dictionary definition of the term, a riser is simply a vertical pipe (see attached). Since Kruse teaches a wide variety of pipes in a wide variety of configurations, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to treat, as the piping system, a riser (vertical pipe). One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully treating the pipe. Further, it is the examiner's position that given the "push and pull" effect disclosed, one of ordinary skill in the art would have had a reasonable expectation of successfully coating the vertical pipe. Lastly, Kruse emphasizes the criticality of completely drying the piping system (4:10-29). Consequently, it would have been obvious to one of

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ordinary skill in the art to inspect the piping system so as to ensure dryness and prevent clumping of the particulate abrasive material.

With respect to claim 5, Kruse teaches introducing compressed air and a dry abrasive to profile the piping system. Kruse does not explicitly state that the remaining residuals are removed by air flushing, doing so would reduce contamination and improve adhesion of the coating material. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse to do so.

With respect to claim 6, Kruse teaches heating the piping system, checking for leaks, preparing and metering the barrier coating composition, injecting the barrier coating composition along with compressed air, and curing the coating layer (6:18-8:5). Kruse does not teach a particular coating thickness, but it is the examiner's position that the thickness of the barrier coating is a result-effective variable. The barrier coating must be thick enough to protect the piping system but not so thick as to be prohibitively expensive or unduly restrict flow through the piping system. Absent clear and convincing evidence of unexpected results establishing the criticality of the claimed thickness, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to optimize the barrier coating thickness (MPEP § 2144.05). Further, Kruse does not teach injecting compressed air to set the coating layer. It is the examiner's position that it is well-known to use air to set a resin coating. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to set the barrier coating by injecting compressed air into the piping system.

With respect to claim 7, while Kruse does teach evaluating the piping system to assure coating standards (8:6-23) and reconnecting devices and instruments after coating is complete

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(8:bottom), this reference does not explicitly state the other limitations recited in this claim. It is the examiner's position that these limitations are all expedients for assuring a functional piping system after the coating process and would be obvious to one of ordinary skill in the art as a part of completing a piping system renovation.

With respect to claims 10 and 19, Kruse is incorporated herein again for the reasons detailed above. In particular, Kruse teaches mixing an epoxy material to form the barrier coating and that the coated piping system is returned to service after 24 hours (6:66-8:5). Insofar as Kruse refers to treating the piping on given floors/levels of a building (6:top), it is the examiner's position that this reads on a piping system in a multi-story building. Kruse does not, however, explicitly state that the piping system is multi-story. It is the examiner's position that Kruse's disclosure that the piping system may be of "any type" (3:10-17) and that it is known to renovate existing pipes in "shafts" (i.e., vertical; 1:20-25), would have suggested to one of ordinary skill in the art to treat a multi-story piping system. As noted above, given the "push and pull" effect disclosed, one of ordinary skill in the art would have had a reasonable expectation of successfully coating the multi-story piping system.

With respect to claim 11, Kruse explicitly teaches pipe diameters within applicant's claimed range, including the endpoint of 6 inches (Tables 1 and 2).

With respect to claim 12, Kruse does not teach a particular coating thickness, but it is the examiner's position that the thickness of the barrier coating is a result-effective variable. The barrier coating must be thick enough to protect the piping system but not so thick as to be prohibitively expensive or unduly restrict flow through the piping system. Absent clear and convincing evidence of unexpected results establishing the criticality of the claimed thickness, it

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would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to optimize the barrier coating thickness (MPEP § 2144.05).

With respect to claims 13-16, Kruse teaches that the piping system may be “of any size, length, or arrangement, in any type of pipe system,” including water pipes in a building or sewer pipes (3:10-17 and 6:top). It is the examiner’s position that such piping systems conventionally include hot and cold water pipes, drain lines, and fire sprinkler pipes. Since Kruse does not disclose any reason why any one of these conventional building/sewer pipes may not be treated by the process, it is the examiner’s position that it would have been obvious to one of ordinary skill in the art to utilize Kruse’s process to treat the pipes claimed by applicant.

With respect to claim 17, Kruse teaches that the pipes may be gas pipes (3:10-17).

With respect to claim 18, insofar as Kruse teaches that the piping system may be “of any size, length, or arrangement, in any type of pipe system,” and insofar as HVAC systems include pipes, it is the examiner’s position that it would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to treat HVAC pipes. One of ordinary skill in the art would have been motivated to do so by the broad teaching of Kruse mentioned above.

With respect to claim 20, because Kruse teaches attaching the equipment/apparatus to opposite ends of the piping system, the layout of the system must be known/mapped. Additionally, Kruse teaches attaching the equipment/apparatus and draining, flushing, and drying the water from the isolated piping system (4:10-29). Kruse does not explicitly teach that the part of the piping system treated is a riser. According to the common, dictionary definition of the term, a riser is simply a vertical pipe (see attached). Since Kruse teaches a wide variety of pipes in a wide variety of configurations, it would have been obvious to one of ordinary skill in the art

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to modify the process of Kruse so as to treat, as the piping system, a riser (vertical pipe). One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully treating the pipe. Further, it is the examiner's position that given the "push and pull" effect disclosed, one of ordinary skill in the art would have had a reasonable expectation of successfully coating the vertical pipe. Lastly, Kruse emphasizes the criticality of completely drying the piping system (4:10-29). Consequently, it would have been obvious to one of ordinary skill in the art to inspect the piping system so as to ensure dryness and prevent clumping of the particulate abrasive material.

With respect to claim 21, Kruse teaches introducing compressed air and a dry abrasive to profile the piping system. Further, Kruse teaches inspecting the piping system to ensure cleaning and profiling standards (5:42-57). Kruse does not explicitly state that the remaining residuals are removed by air flushing, doing so would reduce contamination and improve adhesion of the coating material. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse to do so.

With respect to claim 22, Kruse teaches heating the piping system, checking for leaks, preparing and metering the barrier coating composition, injecting the barrier coating composition along with compressed air, and curing the coating layer (6:18-8:5). Kruse does not teach a particular coating thickness, but it is the examiner's position that the thickness of the barrier coating is a result-effective variable. The barrier coating must be thick enough to protect the piping system but not so thick as to be prohibitively expensive or unduly restrict flow through the piping system. Absent clear and convincing evidence of unexpected results establishing the criticality of the claimed thickness, it would have been obvious to one of ordinary skill in the art

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to modify the process of Kruse so as to optimize the barrier coating thickness (MPEP § 2144.05). Further, Kruse does not teach injecting compressed air to set the coating layer. It is the examiner's position that it is well-known to use air to set a resin coating. Consequently, it would have been obvious to one of ordinary skill in the art to modify the process of Kruse so as to set the barrier coating by injecting compressed air into the piping system.

With respect to claims 23 and 24, although Kruse does teach that *if*, upon inspection, the cleaning/coating of the pipes is found to be unsatisfactory, the steps may be repeated, the disclosure is inclusive of a single pass run at cleaning and coating (5:42-57 and 8:6-11).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,924,913 A is cited as representative of the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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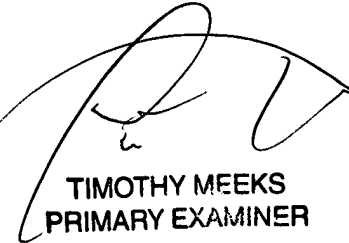
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WPF 2/18/2005

William P. Fletcher III

Examiner

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TIMOTHY MEEKS
PRIMARY EXAMINER